

Alert Notice

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Date: 04/09/90

CFR Reference(s): 30 CFR 250.153; 192.319; 192.327; 192.613; 192.703; 194.246; 195.401;
195.248

Keyword(s): Offshore, Safety

Subject:

Advise offshore water operators of recurring safety problem involving marine vessel operations and crew safety.



US Department of Transportation
Research and Special Programs Administration

400 Seventh Street, SW.
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PIPELINE SAFETY ALERT NOTICE

Alert Notice: ALN-90-01

Date: 04/09/90

To: All Natural Gas and Hazardous Liquid Pipeline Operators

Subject:

Purpose:

The purpose of this Alert Notice is to advise all operators of natural gas and hazardous liquid pipelines located in offshore waters of recurring safety problems involving marine vessel operations and to alert you that exposed pipelines pose a threat to the safety of the crews of fishing vessels in shallow coastal waters and to other marine operations in shipping lanes and deeper offshore waters. The Notice reminds operators of offshore pipelines of the requirements of federal agencies regarding the safety of pipelines. The Notice is sent to all pipeline operators to alert them of similar problems that may occur in inland navigable waterways. Also, OPS is alerting the commercial fishing industry of the potential of unburied offshore pipelines by sending this Notice to Louisiana Shrimp Association, Texas Shrimp Association, Southeastern Fisheries Association, National Fish Meal & Oil Association, and Concerned Shrimpers of America. Pipeline operators or mariners aware of any portion of a submerged pipeline should report that information to the appropriate US Coast Guard District.

George W. Tenley, Jr., Director, Office of Pipeline Safety

Notice:

Background:

OPS is alerting all operators of natural gas and hazardous liquid pipelines located in offshore waters that exposed pipelines pose a threat to the safety of fishing vessels in shallow coastal waters, and to other marine operations in shipping lanes and deeper offshore waters.

Two recent accidents illustrate the need for this Notice. On July 24, 1987, while maneuvering in shallow coastal waters in the Gulf of Mexico (the Gulf) offshore Louisiana, a fishing vessel struck and ruptured an 8-inch diameter natural gas liquids pipeline operating at a pressure of 480 psi. The natural gas and liquids were ignited resulting in the deaths of 2 crewmen. The pipeline

was originally installed in 1968 and buried onshore, parallel to the shoreline. The shoreline underwent substantial erosion and, at the time of the accident, the pipeline reportedly was exposed on the natural bottom in open water approximately 1 mile offshore. A diving survey conducted the day after the accident indicated the pipeline 50 feet from the accident site had a 6-inch cover of soft mud.

The second accident occurred on October 3, 1989. A fishing vessel was maneuvering in 9 to 11 feet of water in the Gulf about 1/2 mile offshore Sabine Pass, TX. The stern of the vessel struck and ruptured a 16-inch diameter natural gas pipeline operating at a pressure of 835 psi. Eleven crew members died as a result of the rupture and ignition of the gas. The pipeline was installed in 1973, 8-1/2 to 10 feet below the natural bottom of the Gulf at the accident site. However, following the accident, divers reported that the pipeline was exposed above the mud line for 1 or more years.

OPS is concerned about the hazard exposed pipelines present to other users of the oceans, particularly in the Gulf, where erosion may have exposed previously buried pipelines and where menhaden and shrimp fishing vessels operate in shallow waters in proximity to these pipelines. Of significant concern is the expressed belief of the fishing industry that all offshore pipelines in shallow waters of the Gulf are maintained in a buried condition once installed.

Current OPS pipeline safety regulations for natural gas and hazardous liquid pipeline require, at the time of construction, a minimum burial depth of 3 feet when the water depth is 12 feet or less (49 CFR 192.327 and 195.248). Installation below the natural bottom is required in water 12-200 feet deep (49 CFR 192.319 and 194.246). Current Minerals Management Service (MMS) regulations require the burial of pipelines in less than 200 feet of water 36-inches below the sea floor (30 CFR 250.153). Also, US Army Corps of Engineers Section 10 permits contain conditions relative to the burial of pipelines (usually 3 feet in Gulf coastal waters of less than 200 feet). Corps permits contain conditions that require maintenance of the authorized work in good condition and in conformance with the terms and conditions of the permit.

OPS pipeline regulations require operators to patrol their lines periodically for the presence of unusual operating and maintenance conditions and to take corrective action if conditions are unsafe. Because this patrolling is generally done using aircraft, pipelines exposed on the seafloor can not be visually detected. It is likely that some pipelines located in shallow waters are exposed or have inadequate cover. It is important to note that if a pipeline operator has knowledge that its pipeline is exposed in areas where shallow water fishing operations are conducted, sections 192.613 and 192.703 applicable to gas pipeline operators, and section 195.401 applicable to hazardous liquid pipeline operators would require the operator to take steps to remove the danger.

In addition, OPS is concerned about other aspects of marine operations that have been reported in offshore pipeline accidents. Since July 1984, OPS has identified 6 incidents that have been attributed to fishing nets snagging pipeline appurtenances, 6 involving fishing vessels or dredging operations, and 5 involving the operation of ships' anchors. Other incidents may have occurred involving marine activities that did not meet the OPS reporting criteria or that were

reported and not readily identified in OPS' incident data. These incidents have caused interruptions to offshore pipeline operations and damage to the pipelines.

In view of the above, each pipeline operator should take the following actions regarding the natural gas and hazardous liquid pipelines located offshore:

1. Identify and caution persons who normally engage in commercial fishing, shrimping, and other marine vessel operations in shallow coastal waters that submerged offshore pipelines may be unprotected on the ocean floor. Marine vessels operating in water depths comparable to a vessel's draft or when operating bottom dragging equipment can be damaged and their crews endangered by an encounter with a submerged pipeline.
2. Identify and caution marine vessel operators in offshore shipping lanes and other offshore areas in which the pipeline is located that activities involving the deployment of fishing nets or anchors, and dredging operations may damage the pipeline, their vessels, and endanger their crews.
3. Identify and correct any conditions which would violate OPS and MMS requirements for each pipeline, and the terms and conditions of a Corps of Engineers permit issued for the pipeline, especially regarding the burial of any line in shallow water that has become exposed through erosion.
4. Obtain and review the National Oceanic and Atmospheric Administration's (NOAA) nautical charts published for the waters where the operator's pipelines are located. Advise the Corps of Engineers and MMS if the pipeline is not identified on these charts and provide as-built drawings so that they can forward this information to NOAA for appropriate application to nautical charts.
5. Identify and caution marine industry organizations and association of the potential hazards involved in operating vessels and auxiliary equipment near submerged pipelines and advise them of the efforts of the pipeline operator to identify and correct any unsafe situations.

OPS is reviewing its pipeline safety regulations regarding offshore pipelines and is working with the Corps of Engineers, MMS, NOAA, and the Coast Guard to develop solutions to the safety problems identified in marine environments. The Coast Guard intends to issue a marine advisory addressing this matter.